NOTES FOR STUDENTS

Taxonomic notes.—LINDAU[5] has published the following new genera of Acanthaceae from Colombia: *Syringidium* and *Kalbreyeriella*.

NAKAI[6] has described eighteen new Japanese species of *Viola*.

HITCHCOCK[7] has published an account of the grasses of British Guiana based upon his collection during the autumn of 1919, and also upon the collection of the Jenman Herbarium. The list of grasses thus far includes 169 species, ten of which are described as new, four of them being species of *Panicum*. Most of British Guiana is covered by virgin forest, with extensive upland savannas only in the south. Of the 169 species included, thirty-three are introduced, the greater proportion of these being in the vicinity of settlements.

DIXON[8] has published an account of the mosses of the Wollaston Expedition to Dutch New Guiana in 1912–1913. He states that "the moss flora of New Guiana affords, perhaps, the most interesting field for the present day bryologist. Large tracts of Central Africa remain no doubt comparatively unexplored, and recent discoveries there show that much is still to be expected of bryological interest." The report includes also some additional mosses from British New Guiana. Among the species enumerated, twenty-three are described as new.

COMPTON[9] has published an account of the plants collected in New Caledonia and the Isle of Pines in 1914. The Gnetales and Ginkgoales are absent from New Caledonia, and the Cycadales are represented by a single species, which occurs only in the littoral zone. On the other hand, the Coniferales are developed to quite an exceptional degree, being represented by thirty-one species, an unusually large number for so small an area. Another remarkable feature of the coniferous flora is that apparently the whole of it is endemic. The range of the Taxineae is extended to New Caledonia by the new genus *Austrotaxus*, while the Cupressineae include the new genus *Callitropsis*.

DIXON[10] has described the following new genera of mosses, mostly from Africa: *Nanobryum*, *Chionoloma*, *Beddomiella*, *Œdipodiella*, *Chamaebryum*, *Physcomitrellopsis*, and *Dimorphocladon*.

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[5] LINDAU, G., Neue Gattungen der Acanthaceen. Notizblatt Bot. Gart. Berlin-Dahlem **8**: 142–144. 1922.

[6] NAKAI, TAKENOSHIN, Violae novae Japonicae. Bot. Mag. Tokyo **36**: 29–39. 1922.

[7] HITCHCOCK, A. S., Grasses of British Guiana. Contrib. U.S. Nat. Herb. **22**: 439–514. *figs. 77–86*. 1922.

[8] DIXON, H. N., The mosses of the Wollaston Expedition to Dutch New Guiana. Jour. Linn. Soc. **45**: 477–510. *pls. 28, 29*. 1922.

[9] COMPTON, R. H., A systematic account of the plants collected in New Caledonia and the Isle of Pines by R. H. COMPTON in 1914. Part II. Gymnosperms. Jour. Linn. Soc. **45**: 421–434. *pls. 26, 27*. 1922.

[10] DIXON, H. H., Some new genera of mosses. Jour. Botany **60**: 101–110. *pl. 564*. 1922.

DIELS,[11] in publishing an account of the Myrtaceae of Papua, describes numerous new species, and establishes the following new genera: *Xanthomyrtus* (14 species) and *Octomyrtus* (3 species). The large genera are *Jambosa* (50 species), and *Syzygium* (44 species).

GANDOGER[12] has published the first part of a series of descriptions of new species from various countries of the world. This first paper includes descriptions of 348 new species, a very large contribution to taxonomy.

SMITH and EVANS[13] have described a new genus (*Craigia*) of Sterculiaceae from China, province of Yunnan. It is a tree or shrub, and in foliage and inflorescence suggests certain species of *Sterculia*.

SARGENT[14] has described twelve new species of *Crataegus*, chiefly from Missouri and Arkansas.

BLAKE[15] has described forty-six new species of plants from Guatemala and Honduras, from a collection made during 1919 by members of an Economic Survey Mission sent out by the State Department. The new species are distributed among twenty-three families, and include two new genera: *Decazyx* (Rutaceae) and *Prosanerpis* (Melastomaceae).

ROBINSON,[16] in his further study of the Eupatorieae, has published seventeen new species of *Mikania* and one new species of *Ageratum*. He has also published [17] local revisions of *Mikania* covering certain regions of South America, as follows: Colombia (32 spp.), Venezuela (13 spp.), Ecuador (18 spp.), Peru (37 spp.), and Bolivia (28 spp.).

NAKAI,[18] in continuation of the study of the woody flora of Korea, has published an elaborate account of the Caprifoliaceae, accompanied by numerous unusually fine plates. Thirty-six species are recognized, distributed among six genera, much the largest being *Lonicera*, with seventeen species. The descriptions and discussions are in both Japanese and English, so that the publication is available for all taxonomists.

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[11] DIELS, L., Die Myrtaceen von Papuasien. Engler's Bot. Jahrb. **57**:356–400. 1922.

[12] GANDOGER, M. MICHEL, Sertum plantarum novarum. Pars prima. Bull. Soc. Bot. France. **65**:24–69. 1918.

[13] SMITH, W. W., and EVANS, W. EDGAR, *Craigia*, a new genus of Sterculiaceae. Trans. Bot. Soc. Edinburgh **28**:69–71. *pl. 1*. 1921.

[14] SARGENT, C. S., Notes on North American trees. IX. Jour. Arnold Arboretum **3**:1–11. 1921.

[15] BLAKE, S. F., New plants from Guatemala and Honduras. Contrib. U.S. Nat. Herb. **24**:1–32. 1922.

[16] ROBINSON, B. L., Records preliminary to a general treatment of the Eupatorieae. I. Contrib. Gray Herb. N.S. no. 64. pp. 1–21. 1922.

[17] ———, The Mikanias of northern and western South America. *Idem*. no. 64. pp. 21–116. 1922.

[18] NAKAI, TAKENOSHIN, Flora sylvatica Koreana. XI. Caprifoliaceae, pp. 92. *pls. 42*. Seoul. 1921.

PAYSON[19] has published a monograph of the genus *Lesquerella*, recognizing fifty-two species, only two of which are new. The synonymy and specimens examined are recorded in detail. Preceding the taxonomic presentation, there is an interesting discussion of the general morphology, phylogeny, and geographical distribution of the genus.

PETCH,[20] in continuation of his studies of entomogenous fungi, has presented a very detailed account of *Hypocrella* and *Aschersonia*. In *Hypocrella* twenty-nine species are described, two of which are new; while in *Aschersonia* thirteen species are described, four of which are new. In addition to the species included in the systematic presentation, a number of species are named as not seen, doubtful, or excluded.—J. M. C.

Origin of variations.—Of extreme interest to students of genetics is a recent number of the *American Naturalist* which contains the papers presented at the Toronto meetings in a symposium on "The origin of variations." JENNINGS,[21] discussing "variation in uniparental reproduction," stresses the fact that the vast majority of observed variations in primitive organisms are strictly non-heritable. There exists, however, a very small residuum of heritable variations, and in considering their evolutionary significance, two types should be distinguished. Seemingly spontaneous changes (mutations ?) appear to have occurred in some forms during a series of asexual generations, and have been isolated by selection to produce new constant races. The cause of these changes is unknown. On the other hand, variations have been induced by environmental changes, which have always reverted to the normal type after a certain number of asexual generations. JENNINGS points out that the period of persistence of such variations evidently depends, in good part, on the number of generations through which the producing agent acted, and expresses the belief that heritable characters, as permanent as any that are known to exist, might be produced by allowing the producing agent to act over a sufficient period of time.

BLAKESLEE[22] describes his work on *Datura*, which by this time has become well known,[23] showing how striking heritable variations accompany changes in chromosome number. These changes in chromosome number may result either from non-disjunction of one or a few chromosome sets, producing "unbalanced types," or may involve a wholesale doubling of all the chromosome sets, giving

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[19] PAYSON, E. B., A monograph of the genus *Lesquerella*. Ann. Mo. Bot. Gard. **8**: 103–236. *figs. 34*. 1921.

[20] PETCH, T., Studies in entomogenous fungi. II. The genera *Hypocrella* and *Aschersonia*. Ann. Roy. Bot. Gard. Peradeniya **7**: 167–278. *pls. 2–5*. 1921.

[21] JENNINGS, H. S., Variations in uniparental reproduction. Amer. Nat. **56**: 5–15. 1922.

[22] BLAKESLEE, A. F., Variations in *Datura* due to changes in chromosome number. Amer. Nat. **56**: 16–31. 1922.

[23] BOT. GAZ. **72**: 178–182. 1921.